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P.O. Box 747
 Falls Church, Virginia 22040-0747
 Phone: (703) 205-8000
 Fax: (703) 205-8050
 (703) 698-8590 (GIV)

Birch, Stewart, Kolasch & Birch, LLP

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 GROUP 1700

Fax

To:	Examiner Justin Fischer	From:	Joseph A. Kolasch, Esq.;
	USPTO		Garth M. Dahlen, Ph.D.
Fax:	703-872-9310	Date:	August 4, 2003
Phone:		Pages:	5 (including cover sheet)
Your Ref.:	Our Ref.: 0229-0656P		
Re:	Serial No.: 09/923,386	CC:	
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Comments: Examiner Fischer,

Pursuant to our telephone conversation on Friday, August 1, 2003, enclosed is our proposed changes to the claims, which I would like to discuss during our personal interview Wednesday, August 6, 2003 at 11AM. Please call me if you have any questions prior to the interview.

Regards,

Garth

PATENT
0229-0656P

IN THE U.S. PATENT AND TRADEMARK OFFICE

APPLICANT: Yasuo WADA CONF NO: 2324
SERIAL NO: 09/923,386 GROUP: 1733
FILED: August 8, 2001 EXAMINER: Fischer, Justin
FOR: PNEUMATIC TIRE

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PROPOSED AMENDMENT FOR EXAMINER'S CONSIDERATION IN PREPARATION FOR
THE AUGUST 6, 2003 INTERVIEW

NOT FOR ENTRY

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A pneumatic tire comprising
a tread portion,
a pair of sidewall portions,
a pair of bead portions each with a bead core and a bead apex
therein,

a carcass comprising a ply of cords extending between the
bead portions through the tread portion and sidewall portions and
turned up around the bead core in each said bead portion from the
inside to the outside of the tire so as to form a pair of turned
up portions and a main portion therebetween,

said bead apex made of hard rubber disposed between the main
portion and turned up portion and extending radially outwards from
the bead core, a length (LA) of the bead apex between the radially

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inner end and radially outer end thereof being in a range of from 0.1 to 0.25 times the section height (H) of the tire,

a reinforcing cord layer composed of a single ply of cords disposed along the axially inside of each said turned up portion, the reinforcing cord layer having a radially outer end (FU) which is positioned radially outside the radially outer end (BU) of the bead apex but radially inside the maximum tire section width point (M), and a radially inner end (FD) which is positioned radially outside the radially outer end of the bead core but radially inside the radially outer end (BU) of the bead apex so that the reinforcing cord layer comprises a main portion disposed between the bead apex and carcass ply turned up portion, and a protruding portion protruding radially outwardly from the radially outer end (BU) of the bead apex, and the protruding portion adjoins the carcass ply main portion and turned up portion to form a triangle cord arrangement.

a length (LB) of the reinforcing cord layer between the radially inner end and the radially outer end thereof being in a range of from 1.2 to 2.0 times said length (LA) of the bead apex,

a length (alpha) of the protruding portion being in a range of not less than 10.0 mm.

the sidewall portions having a minimum thickness (Wmin) being in a range of not more than 0.5 times a maximum thickness (Wmax) of a region where the reinforcing cord layer exists, wherein said minimum thickness (Wmin) occurs between the radially outer end

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(FU) of the reinforcing cord layer and the maximum tire section width point (M).

2. (Original) The pneumatic tire according to claim 1 or 2,
wherein

the carcass is composed of a single ply of radially arranged
cords.

3. (Cancelled)

4. (Currently Amended) The pneumatic tire according to claim
1 or 2, wherein

a radial distance (K) of the radially inner end (FD) of the
reinforcing cord layer from the radially outer end (BUT) (BD)
of the bead core is set in a range of from 0.1 to 0.5 times the
length (LA) of the bead apex.

5. (Original) The pneumatic tire according to claim 1,
wherein

the ratio (LB/LA) of the length (LB) of the reinforcing cord
layer and the length (LA) of the bead apex is in a range of not
less than 1.5 but not more than 1.8.

6. (Currently Amended) The pneumatic tire according to claim
1, wherein

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said maximum thickness (w_{max}) occurs near the radially outer end (BU) of the bead apex, and

~~said minimum thickness (w_{min}) occurs between the radially outer end (FU) of the reinforcing cord layer and the maximum tire section width point (M).~~

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IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A pneumatic tire comprising
a tread portion,
a pair of sidewall portions,
a pair of bead portions each with a bead core and a bead apex
therein,

a carcass comprising a ply of cords extending between the
bead portions through the tread portion and sidewall portions and
turned up around the bead core in each said bead portion from the
inside to the outside of the tire so as to form a pair of turned
up portions and a main portion therebetween,

said bead apex made of hard rubber disposed between the main
portion and turned up portion and extending radially outwards from
the bead core, a length (LA) of the bead apex between the radially
inner end and radially outer end thereof being in a range of from
0.1 to 0.25 times the section height (H) of the tire,

a reinforcing cord layer composed of a single ply of cords
disposed along the axially inside of each said turned up portion,
the reinforcing cord layer having a radially outer end (FU) which
is positioned radially outside the radially outer end (BU) of the
bead apex but radially inside the maximum tire section width point
(M), and a radially inner end (FD) which is positioned radially
outside the radially outer end of the bead core but radially

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inside the radially outer end (BU) of the bead apex so that the reinforcing cord layer comprises a main portion disposed between the bead apex and carcass ply turned up portion, and a protruding portion protruding radially outwardly from the radially outer end (BU) of the bead apex, and the protruding portion adjoins the carcass ply main portion and turned up portion to form a triangle cord arrangement,

a length (LB) of the reinforcing cord layer between the radially inner end and the radially outer end thereof being in a range of from 1.2 to 2.0 times said length (LA) of the bead apex,

a length (alpha) of the protruding portion being in a range of not less than 10.0 mm.

the sidewall portions having a minimum thickness (Wmin) being in a range of not more than 0.5 times a maximum thickness (Wmax) of a region where the reinforcing cord layer exists, wherein said minimum thickness (Wmin) occurs between the radially outer end (FU) of the reinforcing cord layer and the maximum tire section width point (M).

2. (Original) The pneumatic tire according to claim 1 or 2, wherein

the carcass is composed of a single ply of radially arranged cords.

3. (Cancelled)

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4. (Currently Amended) The pneumatic tire according to claim 1 or 2, wherein

a radial distance (K) of the radially inner end (FD) of the reinforcing cord layer from the radially outer end (BU) (BD) of the bead core is set in a range of from 0.1 to 0.5 times the length (LA) of the bead apex.

5. (Original) The pneumatic tire according to claim 1, wherein

the ratio (LB/LA) of the length (LB) of the reinforcing cord layer and the length (LA) of the bead apex is in a range of not less than 1.5 but not more than 1.8.

6. (Currently Amended) The pneumatic tire according to claim 1, wherein

said maximum thickness (Wmax) occurs near the radially outer end (BU) of the bead apex, and

said minimum thickness (Wmin) occurs between the radially outer end (FU) of the reinforcing cord layer and the maximum tire section width point (M).

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REMARKS

Claims 1-2 and 4-6 are pending and stand ready for further action on the merits.

Claim 1 has been amended to recite a triangle cord arrangement wherein the protruding portion protruding radially outwardly from the radially outer end (BU) of the bead apex forms a side of the triangle and the other two sides are formed from the carcass ply main portion and the turned up portion. Support for this amendment can be found on page 8, lines 2-6.

Also, claim 1 has been amended to recite that the length (α) of the protruding portion is in a range of not less than 10 millimeters. Support for this distance range can be found in cancelled claim 3.

In addition, claim 1 has been amended to recite that the minimum thickness (W_{min}) occurs between the radially outer end (FU) of the reinforcing cord layer and the maximum tire section width point (M). Support for this feature can be found in claim 6.

Claims 4 and 6 have been amended to improve clarity.

No new matter has been added by way of the above-amendment.

Issues Under 35 U.S.C. §112, second paragraph

Claim 4 is rejected under 35 U.S.C. §112, second paragraph for being indefinite. Applicant respectfully traverses the rejection.

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Specifically, the Examiner objects to the fact that at line 2 of claim 4, a "radially inner end" is used and it is unclear which feature is being described.

In response, Applicant followed the Examiner's suggestion of amending claim 4 to recite that the "radial distance (K) of the radially inner end (FD) of the reinforcing cord layer from the radially outer end (BD) of the bead core" is in a specific range.

Accordingly, Applicant respectfully submits that claim 4 particularly points out and distinctly claims the subject matter which Applicant regards as the invention. As such, withdrawal of the rejection is respectfully requested.

Issues Under 35 U.S.C. §103

Claims 1-6 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tokutake (U.S. 5,117,886). Applicant respectfully traverses the rejection.

Advantages of the Present Invention

The present invention is drawn to a pneumatic tire having distinctive features from the pneumatic tires of the prior art which enable the inventive tire to have a reduced weight without deterioration in the properties such as steering stability, noise performance and the like.

Specifically, the presently claimed tire contains a triangle cord arrangement wherein one side of the triangle is formed of a

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protruding portion protruding radially outwardly from the radially outer end (BU) of the bead apex, and the other two sides of the triangle are formed from the carcass ply main portion and the turned up portion of the carcass ply. As mentioned on page 8, lines 5-6 of the present specification, this triangle arrangement provides the tire with circumferential rigidity which thereby improves the steering stability.

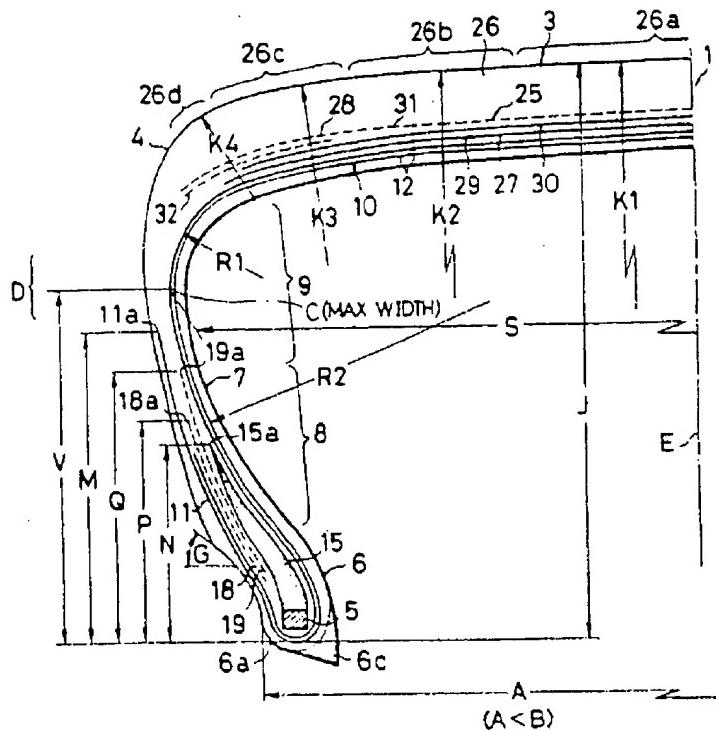
Applicant respectfully submits that the above described features of the present pneumatic tire give the tire superior properties to the tires of the prior art.

Tokutake

The Examiner has taken the position that Tokutake fairly teaches or suggests the inventive pneumatic tire as described in each of claims 1-6. Applicant respectfully submits that Tokutake fail to make obvious the pneumatic tire, as amended herein.

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Tokutake describes his invention using the following figure:



First, Applicant notes that Tokutake fails to teach or suggest the inventive triangle cord arrangement. In the inventive triangle cord arrangement, a triangle is formed wherein one side of the triangle is made of the protruding portion protruding radially outwardly from the radially outer end (BU) of the bead apex and the other two sides are formed of the carcass ply main portion and the carcass ply turned up portion, respectively.

As can be seen in Figure 1 of Tokutake, the turned up portion of the carcass ply does not extend to a point high enough to

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contact the carcass main ply. Accordingly, the triangle cord arrangement as presently claimed, is not found in Tokutake.

In addition, Applicant has amended claim 1 to recite that the minimum thickness (W_{min}) occurs between the radially outer end (FU) of the reinforcing cord layer and the maximum tire section width point (M). This feature was originally described in claim 6. According to the Examiner's comments on claim 6, the Examiner characterizes the tire of Tokutake as follows:

the minimum thickness occurs at a position that is approximately at the maximum section width point.

Accordingly, it is not clear whether the Examiner appreciates the fact that the last clause of claim 6 indicates that the minimum thickness (W_{min}) occurs "between" the radially outer end (FU) of the reinforcing cord layer and the maximum tire section width point (M). The Examiner's comments indicate that Tokutake teach that the minimum thickness occurs at a position that is approximately at the maximum section width point, but the Examiner does not indicate that the minimum thickness of the tire of Tokutake is "between" the radially outer end of the reinforcing cord layer and the maximum tire section width point as presently claimed. Accordingly, it is not clear whether the Examiner appreciates that the minimum thickness occurs at a point below the maximum section width point as was described in claim 6 and now is

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described in claim 1. Applicant respectfully submits that Tokutake neither teaches nor suggests this feature.

Based on the foregoing, it is clear that a *prima facie* case of obviousness cannot be said to exist. As the MPEP directs, all the claim limitations must be taught or suggested by the prior art to establish a *prima facie* case of obviousness. See MPEP §2143.03.

Tokutake does not render the inventive pneumatic tire unpatentable, since Tokutake fails to teach or suggest the inventive triangle cord arrangement and the location of the minimum thickness (w_{min}). As such, withdrawal of the rejection is respectfully requested.

Drawings

Applicant notes that the present application has been filed with five sheets of drawings. However, the Examiner has not indicated whether the drawings are acceptable. Applicant respectfully requests that the Examiner indicates whether the drawings are acceptable in the next communication.

Information Disclosure Statement (IDS)

Applicant timely filed IDS's on August 8, 2001 and July 15, 2003. The Examiner is respectfully requested to enclose signed copies of the PTO-1449 forms which were included with each of these IDS's.

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Conclusion

In view of the above amendments and comments, Applicant respectfully submits that the claims are in condition for allowance. A notice to such effect is earnestly solicited.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), the Applicant hereby petitions for an extension of two (2) months to August 5, 2003 in which to file a reply to the Office Action. The required fee of \$410.00 is enclosed herewith.

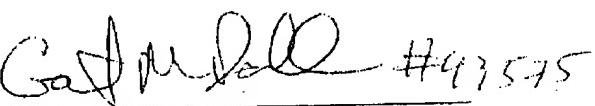
If the Examiner has any questions concerning this application, he is requested to contact Garth M. Dahlen, Ph.D. (#43,575) at the offices of Birch, Stewart, Kolasch & Birch, LLP.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By _____


Joseph A. Kolasch
Reg. No. 22,463

for

JAK/GMD/gh

P. O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000